

# BRIEF SUMMARY: CARB Diesel Fuel Specifications and Test Methods

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This summary is not a legal document and is not intended to be used in lieu of the regulations but as an aid to understanding the specifications of the fuels' regulated properties.

CCR Section <sup>a</sup>	Diesel Parameter	Test Method	Specification	Designated Equivalent Limits CCR Section 2282(h)	Reproducibility
2281	Sulfur Content <sup>b,c,d</sup>	ASTM D2622-94 Equiv: ASTM D5453-93 Equiv: Canadian/CGSB-3.0, No.16.0-95, Method S121	500 ppm 15 ppm <sup>e</sup>	160 ppm(before 6/1/06) 15 ppm (starting 6/1/06)	for D2622: 0.16(x) for D5453: 0.2217(x) <sup>0.92</sup>
2282	Aromatic Hydrocarbon Content <sup>b,c,d</sup>	ASTM D5186-96 (with conversion equation)	10 v%	21.0 w%	0.75 (x) <sup>0.23</sup> (where x = wt%) <sup>f</sup>
2282(e)			small refiner: 20 v%		
2282(h)	API Gravity	ASTM D287-82 Equiv: ASTM D4052-96(2002) <sup>e1</sup>	not applicable	36.9° API (minimum)	0.5° API (at 60°F ±18°)
2284	Lubricity <sup>b,c,d</sup>	ASTM D6079-02	520 microns	520 microns	at 25°C = 0.127 mm at 60°C = 0.136 mm
2282(g)	Below are additional parameters specified for Certified Diesel Formulations (alternative formulations):				
	Polynuclear Aromatic Hydrocarbon Content (PAH)	ASTM D5186-96	Specified in the formulation.	3.5 w%	for x < 5.0 w%: 0.47 (x) <sup>0.45</sup> for x > 10 w%: 1.77 (x) <sup>0.50</sup>
	Nitrogen Content	ASTM D4629-96	Specified in the formulation.	500 ppm	0.85 (x) <sup>0.54</sup> x = average of 2 test results
	Cetane Number	ASTM D613-84 CARB using PAC Diesel Fuel Analyzer as a screen.	Specified in the formulation	53 (minimum)	2.5 @ 40 <sup>g</sup> 2.6 @ 44 <sup>g</sup> 3.1 @ 52 <sup>g</sup> 3.3 @ 56 <sup>g</sup>
	Check the executive order for each certified diesel formulation for any additional specifications.				

Note: for reproducibility, x = test result. underline = current CARB enforcement test method.

a = CCR Section 2285 exempts qualifying military vehicles from CARB diesel fuel requirements.

b = also applies to non-vehicular diesel fuel except for locomotives and marine vessels.

c = CCR Section 2299 extends standard to apply to harborcraft in the South Coast Air Quality Management District on 1/1/06.

d = CCR Section 2299 extends standard to apply to intrastate diesel-electric locomotives and harborcraft on 1/1/07.

e = applies on June 1, 2006. Phase-in periods apply at facilities downstream from import or production facilities.

f = correlation equation: ArHC v% = (0.916)(ArHC w%) + 1.33

g = reproducibility values for intermediate and higher cetane numbers to be obtained by linear interpolation.